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Good Lawns are Made

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Good Lawns . . . are MADE

Iowa has the soils and climate for good lawns. To be at their best, lawn grasses need adequate feeding, moderate watering in dry weather and a weed control program. Here are some tips and guides for "top-shape" lawns.

by H. L. Lantz

GREEN GRASS — the often taken-for-granted basic ingredient of a comfortable homesite. Grass makes our parks and lawns enjoyable. It provides suitable cover for athletic fields and golf courses. It surrounds our homes, our public buildings, our manufacturing plants and our highways.

Iowa affords a good soil and climate for the development of lawns. There are many excellent ones in the state. There are also many poor ones—where turfgrass cover is thin, spotty, weedy and generally far from ideal in appearance. Why? The key to a good lawn lies in knowing *what* to do, *how* to do it and *when* to do it.

"Building" a Lawn . . .

Iowans have built thousands of new homes in the past 10 years; more will be constructed this year. Nearly every new homeowner wants a good lawn. The time to start is before the contractor moves in. Have the top 4-6 inches of topsoil bulldozed into a pile before basement excavation begins. As soon as the house is built and the subgrade established, the pile of topsoil should be evenly distributed over the whole lawn area.

In some cases, it's well worthwhile to add some organic matter and sometimes coarse, sharp sand —particularly if the soil is a clay loam, sticky and subject to packing. Two to 3 cubic yards of cultivated peat plus 2 to 3 cubic yards of coarse sand per 1,000 square feet amounts to 1½ to 2 inches of new material. And it should be incorporated thoroughly into the top 4 or 5 inches of topsoil. Peat and sand materially modify the soil's physical properties and make a better root zone for grass. Soil treated this way is less likely to be compacted by tramping.

Surface water drainage should be *away* from all sides of the house. Hand grading and rolling usually are necessary to firm the topsoil and to eliminate low spots in which water can collect.

Then you're ready to consider fertilizer. Iowa's generally fertile topsoils vary in acidity. But we've rarely found lawn soils acid enough to need lime. Most of our lawn grasses grow well in soils that test pH 6.5 to 7.4.

Just before seeding, apply a complete fertilizer and work it into the upper 2-4 inches of soil. Good results in Iowa have followed applications of 10-10-10 or 12-12-12 at the rate of 20 to 30 pounds per 1,000 square feet. This supplies new grass seedlings with enough soluble plant food materials to promote rapid growth and good firm turf the first season.

There are many fertilizers on the market under various trade names. Nearly all are suited to Iowa soils if you follow the manufacturers' directions on rate of application. Some of the newer fertilizers have "slow-release" nitrogen and are also suitable for a new lawn.

Lawn Grasses . . .

Once the lawn is graded and fertilized, it's time to make a choice of the grass or mixtures of

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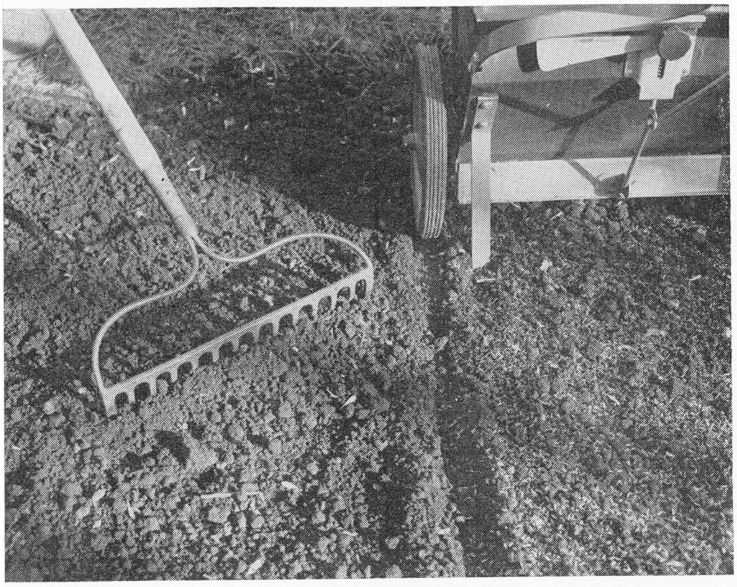
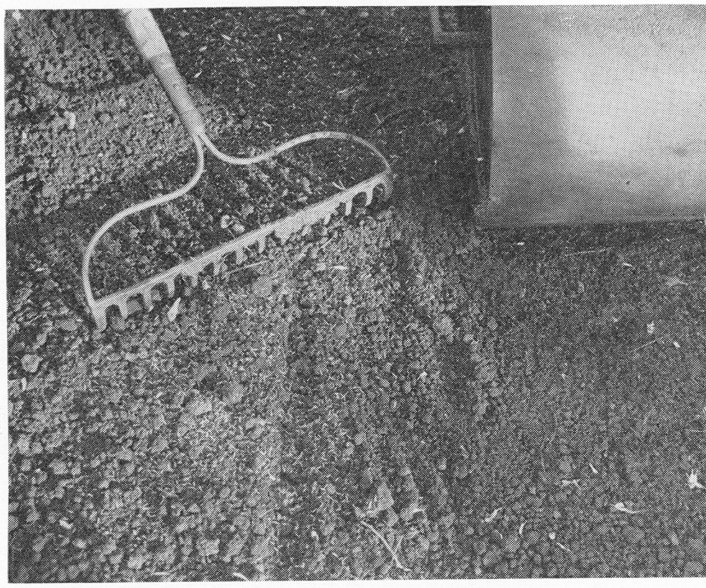




LEFT: You'll get the most accurate seed distribution if you use a good two-wheel seeder-fertilizer distributor, and the seed may be mixed with fertilizer and applied at the same time. Then rake gently to cover the seed. RIGHT: After raking, use a light roller to press the soil firmly about the seed.

grass desired. *Kentucky bluegrass* dominates the lawn picture in Iowa. Many lawns in the state are admittedly "poor," weedy and hardly worthy of being called a lawn. But by and large, we have no better lawn grass than Kentucky bluegrass at present. It thrives on a wide range of soils throughout Iowa. It thrives when properly fertilized and watered. When it can't be watered, it may go dormant in hot, dry weather during July and August. But it greens up and grows promptly with late summer and fall rains.

Since we're often asked about some of the more highly publicized new grasses, let's take a look at a few of the newer grasses. The following remarks are based on years of observation and experiments and apply chiefly to Iowa conditions.

Merion: This is a new variety of bluegrass. It's darker green, and the leaves are broader than those of Kentucky bluegrass. Merion is resistant to leaf spot diseases but susceptible to cereal rusts and curvularia. It responds well to nitrogen fertilizer. Given good care, it's superior to ordinary bluegrass. Merion starts early in spring and grows late in fall. It doesn't, however, seem to work out well for seeding over thin areas in established lawns.

Zoysia: There are several strains. But none is fully satisfactory in Iowa. It cannot be seeded but must be started by sprigs or plugs. The zoysias don't begin to grow until mid-May; in 1956 our experimental plots didn't green up until June 1. The first frost turns zoysia straw colored. Bluegrass, in comparison, stays green until mid-November.

Creeping red fescue and Chewings fescue: These are recommended for shady areas. In open sunny areas there's little value in seeding them with bluegrass; bluegrass will take over, and the fescues will disappear after 4 or 5 years.

Bent grasses: The colonial bents are sometimes useful in lawn mixtures but shouldn't exceed 5 or 10 percent of the mixture.

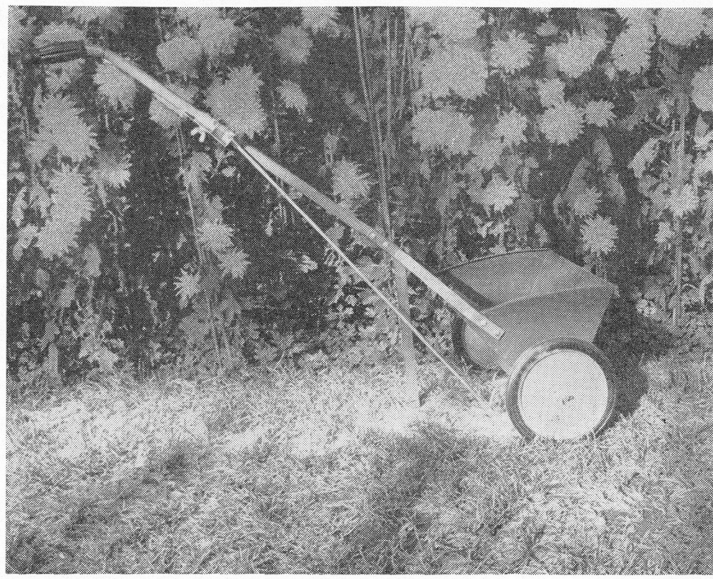
Rye grasses: Domestic rye grass is widely used in lawn mixtures. It can be useful because it germinates in about 5 days—helping to provide a soil cover until the slower bluegrasses germinate and start to grow. Bluegrass seed sometimes takes 21 to 28 days to germinate, and rye grass provides a nurse crop.

Seed Mixtures . . .

Lawn grass seed mixtures for most Iowa soils should contain from 50 to 70 percent bluegrass —only about 15 percent of nurse crop grasses such as the rye grasses or red top. Permanent grasses should make up about 85 percent. Read the label carefully. Low-priced seed generally is the highest-priced seed in the end; it may be loaded with seed of temporary grasses. So it usually pays to read the "ingredients" label so that you'll know just what seed you're buying. Watch out for excessive amounts of weed seed or of dirt, chaff or other inert materials.

Seeding . . .

Rate: Bluegrass is our chief grass for lawn building. Since its seed is relatively expensive, seed carefully. With a well-prepared seedbed, 1 pound of actual bluegrass is enough for 1,000 square feet. If a mixture contains only 50 percent bluegrass seed, sow 2 pounds of the mixture per 1,000 square feet. Too heavy a rate may result in too much competition between the vigorous nurse grasses and the slower-growing bluegrass. A single pound of bluegrass seed contains 2¼ million seeds—enough, if well distributed,



LEFT: Weed control is an essential part of maintaining an attractive lawn. This photo shows a satisfactory type of nozzle being operated from a compressed-air knapsack sprayer. RIGHT: A good fertilizer distributor insures an even distribution, saves money and results in uniform grass response.

to provide 15 seeds per square inch when planted at 1 pound per 1,000 square feet.

Method: It's best to borrow, rent or buy a 2-wheel grass seed spreader. We've been uniformly successful by mixing the required amount of seed into 10 pounds of an organic granular fertilizer and setting the spreader to deliver the correct amount of the mixture to seed and fertilize 1,000 square feet. This method insures even distribution.

Covering: Rake in lightly with a leaf or broom-type rake. Roll with a light roller to firm the soil around the seed. If possible keep the surface moist for the first 10 days. Start mowing when the grass is about 2 inches high. Set your mower at 1½-2 inches. Mow regularly. Nearly every new lawn is weedy. Mowing is essential to keep these weeds under control, and the grass is benefited by mowing. Continue mowing until cold weather checks growth.

Time: Late August or early September seedings are almost always best. Most of the seed will germinate in the fall. And the following spring it will develop a good sod rapidly. If seeded later and it doesn't germinate in the fall, it will be ready to start early in spring.

When spring seeding is necessary, sow as early as the soil can be prepared and weather and soil conditions permit. We've made successful seedings as late as May 1, but weeds then are stiff competitors. Many weeds will succumb, however, if you start mowing as soon as there's anything tall enough to mow. By late summer, the lawn can be very presentable. You can use a spray of 2,4-D safely by early October to destroy remaining dandelions, plantain, other broadleafed weeds.

If you find you've delayed mowing too long and there's a considerable amount of clippings, it's wise to rake them off at once. Better yet, get a grass catcher for your mower.

New lawns can become the "picture lawns" you see if you follow a sound fertilizer program year after year. When water is needed, set your sprinkler to run long enough to wet the soil 5-6 inches deep. Don't water again for 1 or 2 weeks. Set your mower to cut at 1¼ inches, remove the clippings and you'll have a trim, clean appearing lawn.

During the first few years, nearly anyone can grow a good bluegrass lawn. But after that time, fertilizers are needed to maintain a good sturdy turf. Trees and shrubs will have sent out roots and will pick up considerable amounts of plant nutrients and moisture. Start a suitable fertilizer program as soon as the grass begins to take on a yellow-green color in spring and summer. This is the first sign of nitrogen hunger, and the lawn will start to thin out and become weedy. Adequate fertilizers will keep your lawn green, dense and pleasurable.

"Old Lawns" . . .

What can you do to bring a thin, weedy lawn back to a desirable appearance—free of weeds and with a tight, firm turf? There are a number of reasons for poor lawns:

—Lack of fertilizers or incorrect use of them;

—Overuse—too much traffic or "playground" use by children, particularly when the soil is too wet;

—Too much shade;

—Lack of moisture at critical times of the season;

—Overwatering or watering too often;

—Diseases; and

—Weeds; when poorly nourished lawn grasses become weak, weeds come in. When crabgrass gets established, a lawn may be ruined if you don't eradicate this pest.

Lawn maintenance: A thin run-

Fertilizers for Lawn Maintenance.

Fertilizer	Amount	Suggested dates of application		
		First	Second	Third
Readily soluble inorganics				
5-10-4	20 lbs.	April 15	May 15-30	Sept. 1-10
6-10-4	17 lbs.	April 15	May 15-30	Sept. 1-10
10-10-10	10 lbs.	April 15	May 15-30	Sept. 1-10
10-6-4	10 lbs.	April 15	May 15-30	Sept. 1-10
20-0-0 Ammonium sulfate	5 lbs.	April 15	May 15-30	Sept. 1-10
33-0-0 Ammonium nitrate	3 lbs.	April 15	May 15-30	Sept. 1-10
Slowly available organics				
6-4-0 organic (activated sewage sludge)	17 lbs.	April 15	May 15-30	Sept. 1-10
38-0-0 (ureaform)	3 lbs.[a]	April 15	May 15-30	

[a]10 pounds per 1,000 square feet about April 5 to May 15 provides sufficient nitrogen for the season.

down lawn can be greatly improved (1) by a fertilizer program, (2) by taking steps to correct compaction and (3) by spraying to remove the broadleafed weeds.

Lawn grasses in Iowa respond well to nitrogen fertilizers. Good bluegrass will use from 3 to 5 pounds of nitrogen per 1,000 square feet in a season. Apply fertilizers in amounts large enough to replace the nitrogen removed by grass and weeds. Three applications are better than one—with 1 pound of actual nitrogen applied per 1,000 square feet each time. Some of the commonly marketed brand-name lawn fertilizers are 5-10-4, 6-10-4 or 10-6-4. The table shows the approximate amounts to apply to provide 1 pound of nitrogen per 1,000 square feet.

Use judgment in applying fertilizers. If you apply nitrogen when temperatures are high, there's danger of leaf burning. Choose a cool day and sprinkle the grass after application. If after several years of fertilizing, the grass tends to be too lush, reduce the amount of fertilizer or omit it for 1 year.

With the urea form of fertilizer (38-0-0), make one application at 10 pounds per 1,000 square feet in April. Microbiological processes release the nitrogen slowly over an entire season. The organic fertilizer form (activated sewage sludge) also requires microbiological activity to release the plant food materials, but three applications are recommended per season.

Use a good *sharp* lawnmower regularly to maintain a satisfactory turfgrass cover. Mow whenever grass has grown an inch or more after the last mowing; don't let it get too tall. A grass catcher on the mower will help you achieve a cleaner, neater lawn throughout the season.

Rejuvenation: Here are the suggested steps to rejuvenate an old lawn.

1. Choose an adequate nitrogen program and follow it for at least 3 years. Consider three or more applications of fertilizer per season.

2. Overcome compaction. There is only one way to do this without tearing up the lawn completely. Use a mechanical aerator or aerifier; if compaction is severe, run it over the lawn 3 to 5 times in April or early May when the soil is moist or wet. Then fertilize and rake.

3. Use care in watering. Watering is often greatly abused. During a prolonged dry spell, leave the sprinkler in one place 3 to 5 hours or until moisture penetrates to 5 or 6 inches. Then wait for the grass to "tell you" when it needs more water.

4. Diseases are seldom a problem on a strong turf, watered properly. But daily watering sets up an ideal situation for the development of leaf spot, curvularia, brown patch, etc.

5. Remove broadleafed weeds with 2,4-D. Use the amine or sodium salt forms; drift from the ester forms may injure susceptible flowers, shrubs and garden plants. The best time to destroy the greatest number of broadleafed weeds is in late September or October. One application will eliminate practically all dandelions and plantain, though all weeds are seldom eliminated. Plan to use herbicides at least every other year.

Crabgrass is our most serious lawn weed. Experiments during the past 3 seasons have shown that disodium methyl arsonate is the most potent crabgrass control so far developed. It's marketed under various trade names. Follow the manufacturer's directions for rate and method of application.

About the only place bluegrass isn't satisfactory is in shady areas. In these areas, seed 4 pounds per 1,000 square feet of the creeping red fescues or Chewings fescue. Pay special attention to heavy fertilization. Tree roots are soil robbers, and you have to feed enough so that grass gets its share of plant food to survive.